

indicate certain individual specimens. In framing keys, one endeavours to select characters which are found to be most stable in individuals of the same species, so as to minimise the chances of misleading."

Only time will tell whether the Ghorawadi variation is retrograde or progressive.

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18. *BUFO VIRIDIS* IN JAIPUR DISTRICT, RAJASTHAN

(With one plate)

During the rainy season, in July 1995, a large number of newly hatched larvae were collected from a temporary pool and juvenile toads were collected from the grass near the pool and from nearby fields, in sand, crevices, and under pebbles from various localities in Jaipur dist., Rajasthan. It was identified at BNHS as *Bufo viridis*, which has been reported earlier from Jammu & Kashmir, north and west of Punjab and Gujarat and now for the first time from Jaipur (Rajasthan).

*Bufo viridis*, a handsome toad, commonly known as the green toad, grows to a length of 73.5 mm to 98 mm (head to vent). Snout pointed and black, eyes prominent, tympanum distinct.

First finger longer than the second, toes about 2/3 webbed, heels do not meet when the legs are folded at right angles to the body, two shovel-shaped metatarsal tubercles are present. Skin slightly loose laterally, an inverted V-shaped

glandular ridge present between the shoulders, a row of white tubercles present along the outer aspect of the forearm and hind limbs, ventrally the skin is glandular.

Body grey, with dark green marbling with reddish centres. Lips, limbs (fore and hind) and toes are barred. Colour of the ventrum white, but throat and chest stippled with brown.

A burrowing species, it is rarely seen above ground except during the breeding season. These toads are excellent burrowers in loose soil, using their powerful metatarsal tubercles to burrow quickly and disappear underground. While burrowing, the soil is dislodged by sideways movements of the legs, and the animal subsides into the ground; the eyes disappear last, leaving no trace above of its presence. The toads move with slow hops and are very feeble swimmers. They can climb well, doing so over grass in a curious manner, with the help of the pads present

at the bases of the 1st and 2nd fingers, while 3rd and 4th fingers help in gripping.

In captivity, they have the peculiar habit of resting all together in a jumbled heap.

Just after hatching tadpoles were collected in large numbers from temporary rain water pools in various localities in Jaipur dist. The tadpoles were small, ranging from 3-4 mm in length. Head and body flat and oval in shape, snout rounded, nostrils small and circular and situated approximately half way between the eye and the tip of snout. Gill situated at some considerable distance behind the eye.

The mouth is terminal as compared to the tadpoles of *Bufo stomaticus*, where it is ventral. The dental formula is 1:1+1/3, the lower row on the upper lip is clearly interrupted. Teeth small and black, very small and feebly developed on the 3rd row of the lower lip. The lower beak almost V-shaped, upper beak convex and minutely denticulated.

Tail long, twice as long as the head and the body, bluntly pointed and has well developed dorsal and ventral fins. The dorsal fin membrane starts from the posterior extremity of the body and rises gradually. The tadpoles are bottom dwellers.

Colour dorsally dark, mottled with green and red circular patches. Dark pigments are also present on the axial fleshy region of the tail. Ventral surface colourless. Forearms, hand, fingers, thigh, shank, tarsus, foot and toes are barred. A fully grown tadpole measures 30-40 mm.

Development is rapid, being completed within 20-24 days. Metamorphosed toadlets measure approximately 10 mm from snout to vent.

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## 19. FOUR NEW RECORDS AND CHECKLIST OF AMPHIBIANS FROM MAHARASHTRA

The amphibian fauna of Maharashtra has been reported by Daniel (1974) in the Maharashtra State Gazetteer. He has listed 22 species. In 1976, Yazdani and Mahabal reported 11 species from Pune. Later, Ravichandran and Pillai (1990), who worked on the amphibian collection at the Western Regional Station, Zoological Survey of India, Pune raised the number of species from Maharashtra to twenty-nine.

In August, 1995 during an amphibian survey along the Western Ghats in south Maharashtra, I recorded 17 species including four, namely *Limnonectes brevipalmata*, *Rana curtipes*, *Philautus leucorhinus* and *Rhacophorus malabaricus*, which were not reported hitherto from Maharashtra. The details of collection, morphometry and field notes of the newly recorded species are summarized below.

*Limnonectes brevipalmata* (Peters 1871)

**Material:** (1) 1 exp. BNHS 2989; Koyna (550 m), Satara dist., Maharashtra; 16.viii.1995. (2) 4 exp. BNHS 3025, 3039-3041; Amboli (750 m), Sindhudurg dist., Maharashtra; 26.viii.1995.

**Measurements:** Snout-vent length 46.30-53.60 mm; Head length 15.30-16.95 mm; Head width 15.60-17.45 mm; Tibia length 26.65-30.63 mm. All the specimens with vertebral streak.

**Field notes:** The individual from Koyna was picked up from the short-grass patch in a nursery, whereas the specimens from Amboli were collected from a stone heap in the middle of a big man-made tank with 15 cm of water in semi-evergreen forest.

*Rana curtipes* Jerdon 1853

**Material:** 1 exp. BNHS 3038; Amboli